AMENDMENTS TO THE CLAIMS

1. (Original) A method of diagnosing cardiac syndromes, the method comprising the acts of:

acquiring data from a first diagnostic test;

processing the data from the first diagnostic test to produce an indicator;

acquiring data from a second diagnostic test;

processing the data from the second diagnostic test to produce a second indicator;

combining the indicators; and

calculating a risk of a cardiac syndrome based on the combination of indicators.

2. (Original) A method as set forth in claim 1, further comprising the acts of acquiring data from a third diagnostic test and processing the data from the third diagnostic test to produce a third indicator.

3. (Original) A method as set forth in claim 1, wherein the act of combining the indicators includes a Mamdani inference method.

4. (Original) A method as set forth in claim 1, wherein the act of calculating a risk of a cardiac syndrome includes a Mamdani inference method.

5. (Original) A method as set forth in claim 1, wherein the act of acquiring data from a first diagnostic test includes acquiring diagnostic data of a first type.

6. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by an ECG acquisition module.

7. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by a biochemical testing module.

8. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by a history acquisition module.

9. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by a nuclear imaging module.

10. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by an ultrasonic imaging module.

11. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a second diagnostic test includes acquiring diagnostic data of a second type that differs from the diagnostic data acquired by the first diagnostic test.

12. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from an ECG acquisition module.

13. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from a biochemical testing module.

14. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from a history acquisition module.

15. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from a nuclear imaging module.

16. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from an ultrasonic imaging module.

17. (Original) A method as set forth in claim 1, wherein the method is for diagnosing acute cardiac syndromes.

18. (Original) A cardiac syndrome diagnostic system comprising:

a first cardiac activity acquisition device operable to generate a first cardiac activity data;

a second cardiac activity acquisition device operable to generate a second cardiac activity data;

one or more processors to generate a first and second indicator based on the first and second cardiac activity data, respectively; and

a fusion engine operable to receive the first and second indicators, generate a first and second set of degrees of membership based on the first and second indicators, and generate a risk of a cardiac syndrome based on a combination of the first and second sets of degrees of membership and a set of predetermined rules.

19. (Original) A system as set forth in claim 18, wherein the fusion engine includes a fuzzifier.

20. (Original) A system as set forth in claim 18, wherein the fusion engine includes an inference engine.

21. (Original) A system as set forth in claim 18, wherein the fusion engine includes a defuzzifier.

22. (Original) A system as set forth in claim 18, wherein the system diagnoses acute cardiac syndromes.

23. (Original) A diagnostic system comprising:

a first physiological activity acquisition module;

a second physiological activity acquisition module; and

a fusion engine operable to receive data from the first and second modules and to generate a risk of ACS based on a combination of the data received from the first and second modules.

24. (Original) A system as set forth in claim 23, wherein the combination of the data received from the first and second modules is based on fuzzy logic algorithms.

25. (Original) A system as set forth in claim 23, wherein the first physiological activity acquisition module performs a first physiological test on physiological data of a first type.

26. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is an ECG acquisition module.

27. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is a biochemical testing module.

28. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is a history acquisition module.

29. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is a nuclear imaging module.

30. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is an ultrasonic imaging module.

31. (Original) A system as set forth in claim 25, wherein the second physiological activity acquisition module performs a second physiological test on physiological data of a second type that is different than the first type of physiological data.

32. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is an ECG acquisition module.

33. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is a biochemical testing module.

34. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is a history acquisition module.

35. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is a nuclear imaging module.

36. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is an ultrasonic imaging module.

37. (Original) A method for diagnosing acute cardiac syndromes ("ACS"), the method comprising the acts of:

acquiring ECG data;

processing the ECG data to produce an ECG indicator;

acquiring biomarker data;

processing the biomarker data to produce a biomarker indicator;

combining the indicators; and

calculating a risk of ACS using fuzzy logic rules.

38. (Original) A method of diagnosing cardiac syndromes, the method comprising the acts of:

acquiring data from a plurality of diagnostic tests;

processing the data from the plurality of diagnostic tests to produce a plurality of indicators;

combining the plurality of indicators; and

calculating a risk of a cardiac syndrome based on the combination of the plurality of indicators.

39. (Original) A method as set forth in claim 38, wherein the cardiac syndrome is an acute cardiac syndrome.

40. (New) A method of determining a risk for a cardiac event in a patient, the method comprising:

acquiring physiological patient data from a plurality of medical modalities;

processing the physiological data to produce a plurality of indicators;

applying a set of input membership functions to each of the indicators to produce a degrees of membership for each of the indicators;

comparing a set of diagnostic rules to each of the degrees of membership for each of the indicators;

generating a rule output for each comparison;

combining the rule outputs to produce a combined output;

assigning the combined output an output function value; and

comparing the output function value to a plurality of output membership functions to determine the patient's risk of a future cardiac event.

41. (New) A computer program embodied by a computer readable medium capable of being executed by a computer, the computer program for use in a cardiac risk prediction system, the computer program comprising:

instructions that acquire patient data from a plurality of medical modalities;

instructions that generate an indicator for the patient data acquired from each medical modality; and

instructions that fuzzify, compute, combine, and defuzzify the indicators to determine a patient's risk for a future cardiac event.

INTERVIEW SUMMARY

This Interview Summary is further to the Examiner's Interview with the undersigned Applicants' Representative on January 7, 2004. During the Interview, U.S. Patent No. 6,443,889 ("Groth") and U.S Patent No. 6,059,724 ("Campell") were discussed. Applicants' Representative pointed out that there is no suggestion or motivation to combine Groth and Campell. In particular, it was noted that Groth discloses a system that assesses whether a patient has suffered an acute myocardial infarction and, based on the output, determines management and treatment options for the patient. In contrast, it was noted that Campell discloses a system that uses biomarker data to provide a quantitative assessment of the probability of a person acquiring a biological condition within a certain period of time based on comparisons to data from other individuals in the database. One system (Groth) uses present data to determine a past condition or event. The other system (Campell) uses present and past data of one individual to determine the probability of a future event when compared to data from other individuals. The Examiner agreed that Groth and Campell could not be combined for these reasons, and indicated that Claims 1-39 would be allowable over the cited prior art.